



1/16/2015

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

Ms. Diana Williams  
Registration Specialist  
Winfield Solutions, LLC  
P.O. Box 64589  
St. Paul, MN 55164-0589

JAN 16 2015

Subject: Label Notification per PRN 98-10 – Addition of Resistance Management  
Recommendations and MOA code to label as recommended in PRN 2001-5.  
Product Name: E-99  
EPA Registration Number: 1381-195  
Application Date: December 1, 2014  
Decision Number: 498418

Dear Ms. Williams:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, you may contact Karen Samek at (703) 347-8825 or via email at samek.karen@epa.gov.

Sincerely,

A handwritten signature in black ink that reads "Kathryn V. Montague".

Kathryn Montague, Product Manager 23  
Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

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# E-99

*For selective control of many broadleaf weeds in certain crops, including, cereal grains (wheat, barley, millet, oats and rye), corn (field corn, popcorn and sweet corn), fallow land and crop stubble, sorghum (grain and forage sorghum), and soybeans (preplant burndown application only), forests, rangeland and established grass pastures including Conservation Reserve Program (CRP) acres, non-cropland, grasses grown for seed or sod, and ornamental turf.*

Active Ingredients:

2,4-Dichlorophenoxyacetic acid, butoxyethyl ester † .....	87.4%
Inert Ingredients .....	12.6%
Total .....	100.0%

**NOTIFICATION**  
**JAN 16 2015**

†Acid Equivalents: 2,4-dichlorophenoxyacetic acid: 60.1% – 6.0 lb/gal

**Keep Out of Reach of Children**

## CAUTION

**Agricultural Use Requirements**  
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

SEE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS, COMPLETE DIRECTIONS FOR USE, WARRANTY DISCLAIMER AND LIMITATION OF LIABILITY.

**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and "Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

If you wish to obtain additional product information, visit our web site at [www.winfieldsolutionsllc.com](http://www.winfieldsolutionsllc.com).

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 1381-195  
  
Distributed By:  
Winfield Solutions, LLC  
P.O. Box 64589  
St. Paul, MN 55164-0589

EPA Est. No.             
  
Net Contents:     gal

**WINFIELD™**

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**User Safety Recommendations**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**Environmental Hazards**

This product is toxic to aquatic invertebrates and may be toxic to fish. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

**Directions for Use**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

**Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Protective eyewear

**Non-Agricultural Use Requirements**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for Agricultural Pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

**Entry Restrictions for Non-WPS Uses:** When this product is applied to rangeland and established pastures not harvested for hay or seed; non-cropland areas, ornamental turf not grown for sod or seed, and when applied by tree injection method only in forest sites, do not allow people (other than applicator) or pets on treatment area during application. Do not enter or allow people (or pets) to enter the treated area until sprays have dried.

### Storage and Disposal

Do not contaminate water, food or feed by storage or disposal.

**Pesticide Storage:** Keep container tightly closed when not in use. If exposed to subfreezing temperatures, the product should be warmed to at least 40°F and mixed thoroughly before using.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**Container Disposal:** Use label language appropriate for container size and type.

**Nonrefillable containers:** Do not reuse or refill this container. Clean container promptly after emptying.

**Nonrefillable container equal to or less than 5 gallons.** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities such as burning of plastic containers. If burned, stay out of smoke.

**Nonrefillable container greater than 5 gallons.** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities such as burning of plastic containers. If burned, stay out of smoke.

**Refillable container.** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities such as burning of plastic containers. If burned, stay out of smoke.

**FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure or accident, call  
CHEMTREC 1-800-424-9300.**

### Product Information

E-99 herbicide is intended for selective control of many broadleaf weeds in certain crops, including, cereal grains (wheat, barley, millet, oats and rye), corn (field corn, popcorn and sweet corn), fallow land and crop stubble, sorghum (grain and forage sorghum), and soybeans (preplant burndown application only); forests, rangeland and established grass pastures including Conservation Reserve Program (CRP) acres, non-cropland, grasses grown for seed or sod, and ornamental turf.

Apply E-99 as a water spray during warm weather when weeds or woody plants are actively growing. Application under drought conditions will often give poor results. Generally, the lower dosages recommended on this label will be satisfactory for young, succulent growth of susceptible weed species. For less susceptible species and under conditions where control is more difficult, use higher recommended rates. Deep-rooted perennial weeds such as Canada thistle and field bindweed and many woody plants usually require repeated

applications for satisfactory control. Consult your State Agricultural Experiment stations or Extension Service Weed Specialists for recommendations from this label that best fit local conditions.

**Precautions and Restrictions**

**Chemigation:** Do not apply this product through any type of irrigation system.

Do not apply less than 2 gallons total spray volume per acre.

Excessive residues of 2,4-D in the soil may temporarily inhibit seed germination and plant growth.

**Resistance Management Recommendations**

E-99 is a Group 4 herbicide. Any weed population may contain or develop plants naturally resistant to E-99 or other Group 4 herbicides. Weed species with acquired resistance to Group 4 may eventually dominate the weed population if Group 4 herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by E-99 or other Group 4 herbicides.

To delay herbicide resistance consider:

- Avoiding the consecutive use of E-99 or other target site of action Group 4 herbicides that have a similar target site of action, on the same weed species.
- Using tank-mixtures or premixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action, and are both effective at the tank mix or prepack rate on the weed(s) of concern.
- Basing herbicide use on a comprehensive IPM program.
- Monitoring treated weed populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors, and/or Winfield Solutions, LLC representative for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

**Spray Drift Management**

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product. Use low spray pressure to minimize drift.

**Droplet Size**

When applying sprays that contain 2,4-D as the sole active ingredient, or when applying sprays that contain 2,4-D mixed with active ingredients that require a Coarse or coarser spray, apply only as a Coarse or coarser spray (ASAE standard 572) or a volume mean diameter of 385 microns or greater for spinning atomizer nozzles.

When applying sprays that contain 2,4-D mixed with other active ingredients that require a Medium or more fine spray, apply only as a Medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

**Wind Speed**

Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition and there are not sensitive areas (including, but not limited to, residential areas, bodies of water, known habitat for nontarget species, nontarget crops) within 250 feet downwind. If applying a Medium spray, leave one swath unsprayed at the downwind edge of the treated field.

**Temperature Inversions**

If applying at wind speeds less than 3 mph, the applicator must determine if: a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

**Susceptible Plants**

Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption. Susceptible crops include, but are not limited to, cotton, okra, flowers, fruit trees, grapes (in growing stage), fruit trees (foliage), soybeans (vegetative stage), ornamentals, sunflowers, tomatoes, beans, and other vegetables, or tobacco. Small amounts of spray drift that may not be visible may injure susceptible broadleaf plants.

**Other State and Local Requirements**

Applicators must follow all state and local pesticide drift requirements regarding application of 2,4-D herbicides. Where states have more stringent regulations, they must be observed.

**Equipment**

All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

**Aerial Application**

The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.

Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. This requirement does not apply to forestry or rights-of-way applications.

When applications are made with a crosswind, the swath will be displaced downwind. The applicator must compensate for this by adjusting the path of the aircraft upwind.

**Ground Boom Application**

Do not apply with a nozzle height greater than 4 feet above the crop canopy.

2,4-D esters may volatilize during conditions of low humidity and high temperatures. Do not apply during conditions of low humidity and high temperatures.

**Mixing Instructions**

E-99 in water forms an emulsion that tends to separate unless the mixture is kept agitated. Fill the spray tank about half full with water, add the required amount of E-99 with agitation, and then add water to bring the mixture to the required volume. E-99 should be mixed with water prior to addition of any adjuvant such as wetting agent, additional surfactant or emulsifiable oil (crop oil concentrate).

**Note:** Addition of an adjuvant such as a wetting agent, additional surfactant or emulsifiable oil to the spray mixture may increase effectiveness on weeds, but also may reduce selectivity in crops resulting in crop damage.

**Tank Mixing:** When tank mixing, read and follow the label of each tank mix product used for precautionary statements, directions for use, weeds controlled, and geographic and other restrictions. Use in accordance with the most restrictive of label limitations and precautions. No label dosages should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing.

**Mixing with Liquid Nitrogen Fertilizer**

This product may be combined with liquid nitrogen fertilizer suitable for foliar application to accomplish broadleaf weed control and fertilization of corn, small grains or pastures in a single operation. Use E-99 in accordance with recommendations for these crops provided in this label. Use liquid fertilizer at rates recommended by the supplier or Extension Service Specialist. Test for mixing compatibility by mixing spray

ingredients in correct proportions in a clear glass jar before mixing in spray tank. A compatibility aid such as Unite or Complex may be needed in some situations. Compatibility is best with liquid fertilizer solutions containing only nitrogen. Mixing with N-P-K solutions may not be satisfactory, even with the addition of a compatibility aid. Pre-mixing E-99 with 1 to 4 parts water may help in situations when mixing difficulty occurs.

Fill the tank about half full with the liquid fertilizer, then add the required amount of E-99 with agitation. Maintain agitation and complete filling the tank with liquid fertilizer. Apply immediately and continue agitation in spray tank during application. **Do not store the spray mixture.** Application during very cold weather (near freezing) is not advisable.

**Sprayer Clean-Out**

To avoid injury to desirable plants, equipment used to apply this product should be thoroughly cleaned before re-use or applying other chemicals.

1. Rinse and flush application equipment thoroughly after use at least three times with water. Dispose of all rinse water by application to treatment area or apply to non-cropland area away from water supplies.
2. During the second rinse, add 1 qt of household ammonia for every 25 gallons of water. Circulate the solution through the entire system so that all internal surfaces are contacted (15-20 min). Let the solution stand for several hours, preferably overnight.
3. Flush the solution out of the spray tank through the boom.
4. Rinse the system twice with clean water, recirculating and draining each time.
5. Remove nozzles and screens and clean separately.
6. If equipment is to be used to apply another pesticide or agricultural chemical to a 2,4-D susceptible crop, additional steps may be required to remove all traces of 2,4-D, including cleaning of disassembled parts and replacement of hoses or other fittings that may contain absorbed 2,4-D.

**Application Instructions**

**Spray Volume:** Apply with calibrated air or ground equipment using sufficient spray volume to provide adequate coverage of target weeds or as otherwise directed in specific use directions. For broadcast application, apply the recommended rate of this product in a spray volume of 2 or more gallons per acre by air and 10 or more gallons per acre for ground equipment. Where states have regulations, that specify minimum spray volumes, they should be observed. In general, spray volume should be increased as crop canopy, height and weed density increase in order to obtain adequate spray coverage.

**Application Rates:** Generally, lower rates in recommended rate ranges will be satisfactory for more sensitive weeds species, when weeds are small, and when environmental conditions are favorable for rapid growth. Use higher rates in the recommended rate range for less sensitive species and under less favorable growing conditions. For crop uses, do not mix with emulsifiable oil or other adjuvants unless specifically recommended on this label. Deep-rooted perennial weeds such as Canada thistle and field bindweed and many woody plants usually require repeated applications for effective control.

**Spot Treatments**

To prevent misapplication, spot treatments should be applied with a calibrated boom or with hand sprayers using a fixed spray volume per 1,000 sq ft as indicated below.

**Hand-Held Sprayers:** Hand-held sprayers may be used for spot applications of E-99. Care should be taken to apply the spray uniformly and at a rate equivalent to a broadcast application. Application rates in the table are based on the application rate for an area of 1,000 sq ft. Mix the amount of E-99 (fl oz or ml) corresponding to the desired broadcast rate in 1 to 3 gallons of spray. To calculate the amount of E-99 required for larger areas, multiply the table value (fl oz or ml) by the thousands of sq ft to be treated. An area of 1000 sq ft is approximately 10.5 X 10.5 yards (strides) in size.



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**Perennial Weeds**

- |  |   |
|--|---|
| Alfalfa <sup>(1), (2)</sup>                              | eveningprimrose, cutleaf <sup>(2)</sup>     |
| artichoke, Jerusalem <sup>(1)</sup>                      | garlic, wild <sup>(1)</sup>                 |
| aster, many-flower <sup>(1)</sup>                        | hawkweed, orange <sup>(1)</sup>             |
| Austrian fieldcress <sup>(1)</sup>                       | healal                                      |
| bindweed (hedge, field and European) <sup>(1), (2)</sup> | ironweed, western <sup>(2)</sup>            |
| blue lettuce   | ivy, ground <sup>(1)</sup>                  |
| blueweed, Texas  | Jerusalem-artichoke                         |
| broomweed  | loco, bigbend                               |
| bullnettle <sup>(1), (2)</sup>                           | nettles (including stinging) <sup>(1)</sup> |
| carrot, wild <sup>(1)</sup>                              | onion, wild <sup>(1)</sup>                  |
| catnip   | pennywort                                   |
| chicory  | plantains                                   |
| clover, red <sup>(1), (2)</sup>                          | ragwort, tansy <sup>(1)</sup>               |
| coffeeweed   | sowthistle, perennial                       |
| cress, hoary <sup>(1)</sup>                              | thistle, Canada <sup>(1), (2)</sup>         |
| dandelion <sup>(1)</sup>                                 | vervains <sup>(1)</sup>                     |
| docks <sup>(1)</sup>                                     | waterplantain                               |
| dogbanes <sup>(1)</sup>                                  | wormwood                                    |
| goldenrod  |   |

<sup>(1)</sup> These difficult-to-control weeds are only partially controlled and may require repeat applications and/or use of higher recommended rates of this product even under ideal conditions of application.  
<sup>(2)</sup> Control of this weed species is not applicable to use in the state of California.

**Crop Uses**

**Agricultural Use Requirements for Crops:** For the following crop uses, follow PPE and Re-entry instructions in the "Agricultural Use Requirements" section of this label.

**Cereal Grains (Wheat, Barley, Millet, Oats, and Rye)  
 (Not Underseeded with Legumes)**

Crop/Application Timing	E-99 (pt/acre)	Specific Use Directions
<b>Wheat, Barley, Millet, Rye</b> Annual and biennial broadleaf weeds	1/3 to 1 1/3 †	Apply after crop is fully tillered (usually 4 to 8 inches tall) but not forming joints in the stem and weeds are small. <b>Do not apply before tillering or from early boot through the milk stage of growth.</b>
Perennial broadleaf weeds	2/3 to 1 1/3 †	
<b>Oats</b> (Spring Seeded) (Fall Seeded Southern)	1/3 1/2 to 3/4 †	Apply after crop is fully tillered (usually 4 to 8 inches tall) but not forming joints in the stem and weeds are small. <b>Do not apply before tillering or from early boot through the milk stage of growth. Do not apply during or immediately following cold weather.</b>
<b>Preharvest application (all cereals)</b>	2/3	Apply using air or ground equipment to control weeds that could interfere with harvest, or to suppress perennial weeds. Apply when grain is in dough stage. <b>Do not apply from early boot through the milk stage of growth.</b>

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† Use the lower rate in the rate range if small annual or biennial weeds are the major problem. Up to 1 1/3 pt/acre may be applied postemergence to wheat, barley, rye and millet. However, there is greater risk of crop injury at rates greater than 2/3 pt/acre and such rates should be used only when the need for weed control justifies additional risk to the crop. Do not apply this product at the crop seedling stage of growth. Consult state agricultural experiment station or extension service weed specialists for recommendations or suggestions to fit local conditions.

**Restrictions:**

- **Preharvest Interval:** Do not harvest within 14 days of application
- Do not make more than one post-emergence application and one pre-harvest application per crop season.
- Do not apply more than 2 1/3 pt/acre of E-99 (1.75 lb of acid equivalent) per use season.

**Corn (Field Corn, Popcorn and Sweet Corn)**

Application Timing/ Stage of Growth	E-99 (pt/acre)	Specific Use Directions
<b>Preplant (Burndown)</b> <b>Preemergence</b> (Field corn, popcorn, and sweet corn)	2/3 to 1 1/3	<b>General:</b> For best results, growth conditions should be favorable for active weed growth. Use high rate in rate range for less susceptible weeds, cover crops such as alfalfa, weeds in advanced stages of development, or under less favorable growth conditions. <b>Preplant:</b> Apply 7 to 14 days before planting corn to control emerged broadleaf weed seedlings or existing cover crops. <b>Preemergence:</b> Apply any time after planting, but before corn emerges to control broadleaf weed seedlings or existing cover crops. Do not use on light sandy soils.
<b>Postemergence</b> (Field corn, popcorn, and sweet corn) Annual broadleaf weeds Crop up to 8 inches tall  Crop 8 inches tall to tasseling (directed spray only)  Perennial broadleaf weeds	1/3 to 2/3  2/3  2/3	Apply when weeds are small and corn is less than 8 inches tall (to top of canopy). If corn is more than 8 inches tall, use drop nozzles to keep spray off foliage. Treat perennial weeds when they are in bud to bloom stage. <b>Do not apply from tasseling to hard dough stage.</b> <b>Note:</b> Corn treated with 2,4-D may become temporarily brittle. Wind or cultivation may cause stem breakage during the period of time that corn is brittle. <b>Sweet Corn:</b> To minimize potential for crop injury, use only lowest rate in rate range.
<b>Preharvest</b> (Field corn and popcorn only)	up to 2	Apply after corn is in hard dough (or denting) stage. Do not make preharvest applications to sweet corn.

**Precautions:**

- Do not make preplant or preemergence applications to light sandy soils.
- Corn hybrids vary in tolerance to 2,4-D. Some are easily injured. Apply only to varieties known to be tolerant to 2,4-D. Consult the seed company or your Agricultural Experiment Station or Extension Service Weed Specialist for this information.
- **Note:** Corn treated with 2,4-D may exhibit stem brittleness for 8 – 10 days following application. During this period, the crop is more susceptible to stem breakage from cultivation or wind.

**Restrictions (Field Corn and Popcorn):**

- **Preharvest interval:** Do not harvest for grain or use treated crop as fodder within 7 days after application.

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- Do not make more than one preplant or preemergence application, more than one postemergence application, and more than one preharvest application per use season.
- Do not apply more than 4.0 pt/acre of E-99 (3.0 lb of acid equivalent) per use season.

**Restrictions (Sweet Corn):**

- **Preharvest interval:** Do not harvest within 45 days after application or permit meat or dairy animals to forage or graze treated area within 7 days after application.
- Do not make more than one preplant or preemergence application, and one postemergence application per use season.
- A minimum of 21 days between applications is required.
- Do not apply more than 2.0 pt/acre of E-99 (1.5 lb of acid equivalent) per use season.

**Fallowland and Crop Stubble**

Fallowland is considered to be idle land, postharvest to crops or between crops.

Type of Weeds	E-99 (pt/acre)	Specific Use Directions
Annual broadleaf weeds	2/3 to 1 1/3	Use a lower rate in the rate range when weeds are small (2 to 3 inches tall) and actively growing. Use a higher in the rate range when weeds are larger and/or growing conditions are less favorable.
Biennial broadleaf weeds	1 1/3 to 2 2/3	Apply when musk thistles or other biennial species are in the seedling to rosette stage and before development of flower stalks. Use lower rates in the spring during the rosette stage and the highest rate in the fall or when flower stalks have developed.
Perennial broadleaf weeds	1 1/3 to 2 2/3	Apply when perennial weeds are in bud or bloom stage and actively growing. Do not disturb treated areas for at least 2 weeks after application or until top growth is dead.
Wild garlic and onion in crop stubble	2 2/3	Apply to new regrowth of wild garlic or onion that occurs in the fall after harvest of other crops.

**Precaution:** For best weed control results, do not cultivate for at least two weeks after application or until top growth is dead.

**Precautions and Restrictions:**

- **Preharvest interval:** Do not cut forage for hay within 7 days of application.
- Do not re-apply within 30 days of a previous application.
- Do not make more than 2 applications per season.
- Do not apply more than 5 1/3 pt/acre of E-99 (2.0 lb of acid equivalent) per use season.

**Planting in Treated Areas**

**Crops on this Label and Labels of other 2,4-D Products:** Within 29 days after an application of this product, plant only those crops listed on this or other registered 2,4-D labels. Follow more specific limitations, if any, provided in directions for specific crops. Labeled crops may be at risk of crop injury or loss if planted soon after application; especially during the first 14 days. Degradation factors described below should be considered in weighing this risk.

**All Other Crops:** Those not listed on any 2,4-D product label may be planted 30 or more days after application without concern for illegal residues in the planted crop. However, under certain conditions, there may be a risk of injury to these crops. Degradation factors described below should be considered in weighing this risk. Under average conditions, any crop may be planted without risk of injury if at least 90 days of soil temperatures above freezing have elapsed since application.

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**Degradation Factors:** When planting into treated areas, the risk of crop injury is less if lower rates of product were applied and conditions following application have included warm, moist soil conditions that favor rapid breakdown of 2,4-D. Risk is greater if higher rates of product were applied and soil temperatures have been cold and/or soils have been excessively wet or dry in the days following application. Consult your local agricultural extension service for information about susceptible crops and risk of crop injury prior to planting into treated fields in your area.

**Precautions for Planting Cotton:** Following application of E-99 and following a minimum of 1" rainfall or irrigation in a 24 hr. period, wait an interval of 30 days prior to planting cotton. Failure to observe these precautions may result in crop injury.

**Sorghum (Grain Sorghum (Milo) and Forage Sorghum)**

Application Timing/ Stage of Growth	E-99 (pt/acre)	Specific Use Directions
<b>Postemergence</b> † Crop 6 - 8 inches tall Crop 8 - 15 inches tall (directed spray only)	1/3 to 2/3 † 1/2 to 2/3	Apply when sorghum is 6 to 15 inches tall. If sorghum plants are more than 8 inches tall (top of canopy), use drop nozzles and apply as a directed spray to minimize exposure of sorghum plants. Do not use with oil or other adjuvants. <b>Do not treat during boot, flowering or dough stage.</b>

† Temporary crop injury can be expected under conditions of high soil moisture and high air temperatures. If it is necessary to apply this product under these conditions, use no more than 1/2 pint per acre.

**Precautions and Restrictions:**

- Sorghum hybrids vary in tolerance to 2,4-D. To avoid potential crop injury, use this product only on varieties known to be tolerant to 2,4-D. Consult your seed company representative, agricultural experiment station or extension service weed specialist for information regarding tolerant hybrids.
- Do not permit meat or dairy animals to consume treated crop as fodder or forage for 30 days after application.
- **Preharvest interval:** Do not harvest grain for 30 days following application.
- Do not make more than one application per use season.
- Do not apply more than 2/3 pt/acre of E-99 (0.5 lb of acid equivalent) per use season.

**Soybeans (Preplant Burndown Application Only)**  
(Not for Use in California)

Application Timing	E-99 (pt/acre)	Specific Use Directions
Preplant (Burndown)	1/2 to 2/3	Apply not less than 7 days before planting soybeans. <b>See Use Precautions and Restrictions below.</b>
	2/3 to 1 1/3	Apply not less than 15 days before planting soybeans. <b>See Use Precautions and Restrictions below.</b>

**Directions:** Use E-99 to control emerged broadleaf weeds or existing cover crops. For best results, apply when weeds are small and actively growing. Use the higher rate in the respective rate range for larger weeds and when perennials are present. Compatible crop oil concentrates, agricultural surfactants and fluid fertilizers approved for use on growing crops may be added to spray mixtures to increase the herbicidal effectiveness on certain weeds. Read and follow all directions and precautions on this label and on the label of each product added to the spray mixture.

**Use Precautions, Restrictions and Limitations:**

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- **Important Notice:** Unacceptable injury to soybeans planted in treated fields may occur. Whether or not soybean injury occurs and the extent of such injury will depend on weather (temperature and rainfall) from herbicide application until soybean emergence and agronomic factors such as the amount of weed vegetation and previous crop residue present at the time of application. Injury is more likely under cool rainy conditions and where there is less weed vegetation and crop residue present.
- Do not disturb treated soil through tillage between application and planting of soybeans.
- Do not use on sandy soils with less than 1.0% organic matter.
- In treated fields, plant soybean seed as deep as practical, but not less than 1.0 inch deep. Adjust the planter, if necessary, to ensure that planted seed is adequately covered.
- Do not make more than one application per season regardless of the application rate used.
- **Do not apply E-99 as a preplant application in soybeans unless you are prepared to accept the results of soybean injury, including possible stand loss and/or yield reduction.**
- During the growing season following application, do not replant treated fields with crops other than those labeled for use with E-99.
- Do not apply more than 1 1/3 pt/acre of E-99 (1.0 lb of acid equivalent) per use season.

**Forestry, Rangeland, Established Pasture, and Non-cropland Uses**

**Agricultural Use Requirements for Forest Use (Except Tree Injection Use):** For use in forests, follow PPE and Reentry instructions in the "Agricultural Use Requirements" section under the "Directions for Use" heading of this label.

**Agricultural Use Requirements for Rangeland, Pasture, Forest (Tree Injection Only) and Non-cropland Areas:** When this product is applied to rangeland and established pastures not harvested for hay or seed; non-cropland areas, and when applied by tree injection in forest sites, follow reentry requirements given in the "Non-Agricultural Use Requirements" section under the "Directions for Use" heading of this label.

**Forestry Uses**

**Forest site preparation, forest roadsides, brush control, established conifer release, including Christmas trees and reforestation areas**

Treatment Site Method of Application	E-99 Use Rates	Specific Use Directions
Annual Weeds	1 1/3 to 2 2/3 pt/acre	Apply when weeds are small and growing actively before the bud stage. Apply when biennial and perennial species are in the seedling to rosette stage and before flower stalks appear. For difficult to control perennial broadleaf weeds and woody species, use up to 2 2/3 qt of E-99 and 1 to 4 qt of Garlon* 3A herbicide per acre. For conifer release, make application in early spring before budbreak of conifers when weeds are small and actively growing.
Biennial and perennial broadleaf weeds and susceptible woody plants	2 2/3 to 5 1/3 pt/acre	
Spot Treatment to control broadleaf weeds	See Instructions for "Spot Treatment"	<b>Note:</b> To control broadleaf weeds in small areas with a hand sprayer, use an application rate equivalent to the recommended broadcast rate and spray to thoroughly wet all foliage. See rate conversion table and instructions for "Spot Treatment" and use of hand-held sprayers under "Application".
Conifer Release: Species such as white pine, ponderosa pine, jack pine,	1 to 2 qt/acre	To control competing hardwood species such as alder, aspen, birch, hazel, and willow, apply from mid to late summer when growth of conifer trees has hardened

red pine, black spruce, white spruce, red spruce, and balsam fir		off and woody plants are still actively growing. Apply with ground or air equipment, using sufficient spray volume to ensure complete coverage. Because this treatment may cause occasional conifer injury, do not apply if such injury cannot be tolerated.
Directed Spray: Conifer plantations including pine	2 2/3 qt/100 gal	Apply when brush or weeds are actively growing by directing the spray so as to avoid contact with conifer foliage and injurious amounts of spray. Apply in water carrier in a spray volume of 10 to 100 gallons per acre.
Surface of Cut Stumps	Or 1 2/3 fl oz/gal of water	Apply as soon as possible after cutting trees. Thoroughly soak the entire stump with the 2,4-D mixture including cut surface, bark and exposed roots.
Frill and Girdle		Cut frills (overlapping V-shaped notches cut downward through the bark in a continuous ring around the base of the tree) using an axe or other suitable tool. Saturate the freshly cut frills with the 2,4-D mixture.
Tree Injection Application	(1 to 1 1/3 ml per injection site)	To control and prevent resprouting of unwanted hardwood trees such as elm, hickory, oak, and sweetgum in forests and other non-crop areas, apply by injecting at a rate of 1 ml of undiluted E-99 per inch of trunk diameter as measured at breast height (DBH), approximately 4 1/2 ft above the ground. Injection sites, however, should be as close to the root collar as possible and the injection bit must penetrate the inner bark. Applications may be made throughout the year, but for best results apply between May 15 and October 15. Maples should not be treated during the spring sap flow.  For hard to control species such as ash, maple, and dogwood use 2 ml of undiluted E-99 per injection site or double the number of 1 ml injections.  <b>Note: No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is directly injected into agricultural plants.</b>

**Precautions and Restrictions:**

- Do not allow directed sprays to contact conifer shoot growth (current year's new growth) or injury may occur.
- Do not apply to nursery seedbeds.
- For conifer release, do not use on plantations where larch is among the desired species.
- For broadcast applications, do not apply more than 5 1/3 pt/acre of E-99 (4.0 lb of acid equivalent) per 12-month period.
- Limited to one broadcast application, one basal spray/cut surface application, and one injection application per year.

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**Rangeland, Established Grass Pastures (Including Perennial Grasslands Not In Agricultural Production Such As Conservation Reserve Program Acres)**

Target Weeds or Woody Plants	E-99 Use Rates	Specific Use Directions
Annual broadleaf weeds  Biennial and perennial broadleaf weeds	1 1/3 pt/acre  1 1/3 to 2 2/3 pt/acre	For best results, apply when weeds are small and growing actively before the bud stage. Apply when musk thistles or other biennial species are in the seedling to rosette stage and before flower stalks appear. Refer to the "Weeds Controlled" section for a listing of susceptible weed species and weeds that may be only partially controlled and require repeat applications and/or use of higher recommended rates, even under ideal conditions of application.
Spot Treatment to control broadleaf weeds	0.85 fl oz / gal of spray solution (See Instructions for "Spot Treatment")	<b>Note:</b> To control broadleaf weeds in small areas with a hand sprayer, use an application rate equivalent to the broadcast rate recommended for this treatment site and spray to thoroughly wet all foliage. Mix 0.85 fl oz per gal of spray solution and apply through pump up sprayer or backpack sprayer. Addition of a non ionic surfactant is recommended to improve coverage. See rate conversion table and instructions for "Spot Treatment" and use of hand-held sprayers under "Application".
Cut Stump, Frill and Girdle and Tree Injection Application Methods	See instructions for these application methods in Forestry Uses section of this label.	
Wild garlic and wild onion	2 2/3 pt/acre	Make three applications (fall-spring-fall or spring-fall-spring) starting in late fall or early spring.
Broadleaf weed control in newly sprigged coastal bermudagrass	1 1/3 to 2 2/3 pt/acre	Applications may be made either preemergence or postemergence. Follow "Specific Use Directions" for annual, biennial and perennial broadleaf weed control, above.
Southern wild rose Broadcast application  Spot treatment	Up to 2 2/3 pt/acre 0.85 fl oz / gal of spray solution	<b>Broadcast:</b> Apply in a spray volume of 5 or more gallons per acre by aircraft or 10 or more gallons per acre by ground equipment. <b>Spot treatment:</b> Apply when foliage is well developed. Thorough coverage is required. Mix 0.85 fl oz per gal of spray solution and apply through pump up sprayer or backpack sprayer. Addition of a non ionic surfactant is recommended to improve coverage. Two or more treatments may be required.  Do not exceed 2 2/3 pt per acre per application.
CRP Acres	For program lands such as CRP, consult program rules to determine whether grass or hay may be used. The more restrictive requirements of the program rules or this label must be followed.	

**Precautions and Restrictions:**

- Do not use on bentgrass, alfalfa, clover, or other legumes.
- Do not use on newly seeded areas until grass is well established.
- Do not use from early boot to milk stage where grass seed production is desired.

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- Do not reapply within 30 days of a previous application.
- Do not make more than two applications per season.
- Do not apply more than 5 1/3 pt/acre of E-99 (4.0 lb of acid equivalent) per use season.
- **Preharvest interval:** Do not cut forage for hay within 7 days of application. For program lands, such as CRP, consult program rules to determine whether grass or hay may be used. The more restrictive requirements of the program rules or this label must be followed.
- **For spot treatment:** Do not exceed 2 2/3 pints product/acre per application. If grass is to be cut for hay, Agricultural Use Requirements for the Worker Protection Standard are applicable.

**Non-cropland Areas**

**Such as fencerows, hedgerows, roadsides, drainage ditches, rights-of way, utility power lines, railroads, and airports**

Applications to non-cropland areas are not applicable to treatment of commercial timber or other plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes.

Treatment Site Method of Application	E-99 Use Rates (pt/acre)	Specific Use Directions
Annual broadleaf weeds  Biennial and perennial broadleaf weeds  Susceptible woody plants	1 1/3 to 2 2/3  2 2/3  2 2/3 to 5 1/3	Apply when annual weeds are small and growing actively before the bud stage. Biennial and perennial weeds should be rosette to bud stage, but not flowering at the time of application. For difficult to control perennial broadleaf weeds and woody species, tank mix up to 2 2/3 qt of E-99 plus 1 to 4 qt of Garlon 3A herbicide per acre. <b>For ground application:</b> (High volume) apply a total spray volume of 100 to 400 gallons per acre; (low volume) apply a total spray volume of 10 to 100 gallons per acre. <b>For helicopter:</b> Apply a total spray volume of 5 to 30 gallons per acre.
Spot Treatment to control broadleaf weeds	0.85 fl oz / gal of spray solution (See Instructions for "Spot Treatment")	<b>Note:</b> To control broadleaf weeds in small areas with a hand sprayer, use an application rate equivalent to the broadcast rate recommended for this treatment site and spray to thoroughly wet all foliage. Mix 0.85 fl oz per gal of spray solution and apply through pump up sprayer or backpack sprayer. Addition of a non ionic surfactant is recommended to improve coverage. See rate conversion table and instructions for "Spot Treatment" and use of hand-held sprayers under "Application".
Tree Injection Application	See instructions for tree injection application in "Forestry Uses" section.	
Southern wild rose Broadcast application  Spot treatment	up to 2 2/3  0.85 fl oz / gal of spray solution	Broadcast: Apply in a spray volume of 5 or more gallons per acre by aircraft or 10 or more gallons per acre by ground equipment. <b>Spot treatment:</b> Apply when foliage is well developed. Thorough coverage is required. Mix 0.85 fl oz per gal of spray solution and apply through pump up sprayer or backpack sprayer. Addition of a non ionic surfactant is recommended to improve coverage. Two or more treatments may be required.

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**Precautions and Restrictions:**

- Do not apply to newly seeded areas until grass is well established.
- Bentgrass, St. Augustine, clover, legumes and dichondra may be severely injured or killed by this treatment.
- Do not reapply to a treated area within 30 days of a previous application.
- Do not apply more than 5 1/3 pt/acre of E-99 (4.0 lb of acid equivalent) per use season.
- **Postemergence (annual and perennial weeds):** Do not make more than 2 applications per year
- **Postemergence (woody plants):** Do not make more than 1 application per year

**Turf Uses**

**Grasses Grown for Seed or Sod Farms**

**Agricultural Use Requirements:** When used in grass grown for seed or sod farms, follow PPE and reentry instructions in the "Agricultural Use Requirements" section of this label.

Treatment Site (Application Timing)	E-99 (pt/acre)	Specific Use Directions
Grasses Grown for Seed (Postemergence Use) Seedling grass (five-leaf stage or later)  Well-established grasses	1/2 to 2/3   2/3 to 2 2/3	Apply when weeds are small and actively growing. For best results, apply when soil moisture is adequate for active weed growth. Do not apply to newly seeded grasses until well established (five-leaf stage or later) and then use a maximum of 2/3 pt/acre. Cool season grasses are tolerant of higher rates. <b>Do not apply to grass in the early boot through milk stage if seed production is desired.</b> When grass is well established, higher rates of up to 2 2/3 pints/acre may be applied for control of hard-to-kill annual or perennial weeds.
Sod Farms (Postemergence)	1 1/3 to 2 2/3	Deep-rooted perennials such as bindweed and Canada thistle may require repeat applications. Avoid mowing sod farms for 1 to 2 days before or after application. Delay irrigation until the day following application.

**Precautions and Restrictions:**

- Do not use on creeping grasses such as bentgrass except as a spot treatment.
- Do not use on injury-sensitive southern grasses such as St. Augustinegrass.
- Do not use on dichondra or other herbaceous ground covers; legumes may be damaged or killed.
- Do not reapply to a treated area within 21 days of a previous application.
- **Reseeding:** Delay reseeding at least 30 days following application. Preferably, with spring application, reseed in the fall and with fall application, reseed in the spring.
- **Preharvest interval:** Do not cut forage for hay within 7 days of application
- Do not make more than two applications of E-99 per year.
- Do not apply more than 5 1/3 pt/acre of E-99 (4.0 lb of acid equivalent) per use season.

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### Ornamental Turf (Excluding Grasses Grown For Seed or Sod Farms)

(Includes lawns, golf courses, cemeteries and parks, airfields, roadsides, vacant lots, drainage ditch banks)

**Use Requirements for Ornamental Turf Areas:** When this product is applied to ornamental turf areas, follow PPE and reentry instructions in the "Non-agricultural Use Requirements" section of this label.

Treatment Site (Application Timing)	E-99 (pt/acre)	Specific Use Directions
Ornamental Turf (Postemergence) Seedling grass (five-leaf stage or later)	1/2 to 2/3	Apply when weeds are small and actively growing. For best results, apply when soil moisture is adequate for active weed growth.
Well-established grasses	1 1/3 to 2	Deep-rooted perennial weeds such as bindweed and Canada thistle may require repeat applications.
Biennial and perennial broadleaf weeds	2	Do not apply to newly seeded grasses until well established (five-leaf stage or later) and then use a maximum of 2/3 pt/acre. Cool season grasses are tolerant of higher rates.

#### Precautions, Restrictions:

- Do not use on creeping grasses such as bentgrass except as a spot treatment.
- Do not use on injury-sensitive southern grasses such as St. Augustinegrass.
- Do not use on dichondra or other herbaceous ground covers. Legumes may be damaged or killed.
- Do not reapply within 21 days of a previous application.
- **Reseeding:** Delay reseeding at least 30 days following application. Preferably, with spring application, reseed in the fall and with fall application, reseed in the spring.
- Do not apply more than 2 broadcast applications or apply more than 4 pt/acre per year per treatment site (does not include spot treatments).
- Do not apply more than 2 pt/acre of E-99 (1.5 lb acid equivalent) per application.

Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for injunctive relief in Washington Toxics Coalition, et. al. v. EP, C01-0132C, (W.D. WA). For further information, please refer to <http://www.epa.gov/espp/wtc/>.

#### WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE, UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

